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Appl. No. 10/041,034
Amdt. dated September 25, 2006
Reply to Office Action of June 26, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-3. (Canceled)

4. (Currently Amended) A customizable application system comprising:
an internet application system ~~configured~~ operable to support an internet application, the internet application associated with metadata configured for generating a plurality of application user interfaces each having a customizable interaction model, the internet application system including [[, a]] a user interface generator ~~configured~~ operable to generate the application user interface [[,]] and [[b]] a web application server ~~configured~~ operable to deliver the application user interface to a client;

a personalization system including a personalization engine and a user profile interface, the personalization system ~~configured~~ operable to allow users to modify personalization data characterizing the customizable interaction model in more than one of the plurality of application user interfaces, the user-modifiable personalization data allowing the users to each modify the functionality of elements of the customizable interaction model for that user; and

a data repository including a data record for storing the personalization data, the data record being accessible using the metadata.

5. (Previously Presented) The customizable application system of claim 4, wherein members of the plurality of application user interfaces include separately configurable interaction models.

6. (Previously Presented) The customizable application system of claim 4, wherein timing of communication between the client and the web application server is responsive to the interaction model.

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7. (Currently Amended) A system embodied in at least one computer readable medium for developing an internet application including an application user interface, the system comprising:

an integrated development environment configured for a developer to specify a user interface element in the internet application user interface, the user interface element having a user customizable interaction model, the user customizable interaction model configured to determine timing of communication between a client displaying the application user interface and a server supporting the internet application, the user customizable interaction model further allowing each user of the application user interface to modify functionality of the user interface element;

an application designer configured to produce metadata to characterize the user customizable interaction model; and

a data repository including a user modifiable data record configured to ~~further~~ characterize the user-modified functionality of the user customizable interaction model, the data record being accessible using the metadata.

8. (Currently Amended) The system of claim 7, wherein the integrated development environment is further configured to specify display of an interaction model control command in the application user interface, ~~[[;]]~~ the interaction model control command being configured for a user to change the user customizable interaction model.

9. (Previously Presented) The system of claim 7, wherein the user customizable interaction model includes deferred and immediate modes.

10. (Previously Presented) The system of claim 7, wherein the user customizable interaction model is configurable according to the identity of a user or the identity of the client.

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11. (Previously Presented) The system of claim 7, wherein a state of the user customizable interaction model is further configurable to persist between uses of the application user interface.

12. (Previously Presented) The system of claim 7, wherein the user modifiable data record is user modifiable using a configuration system.

13. (Previously Presented) The system of claim 7, wherein the user modifiable data record is user modifiable using a personalization system.

14. (Previously Presented) The system of claim 13, wherein the personalization system is included in the internet application.

15. (Currently Amended) An customizable application system comprising:
an internet application system configured to support an internet application;
an application user interface including a user interface element, the application user interface configured as an interface between the internet application and a user, the user interface element including a customizable interaction model allowing the user to modify functionality of the user interface element, the user interface element with user-modified functionality configured for delivery to a client over a computer network;
metadata characterizing the customizable interaction model; and
a data repository including a data record for characterizing with the customizable interaction model, the data record being user modifiable and being accessible using the metadata.

16. (Previously Presented) The customizable application system of claim 15, wherein the application user interface is configured for display on the client using standard web browser protocols.

17. (Previously Presented) The customizable application system of claim 15, wherein the application user interface is further configured for display on the client using features of a web browser, the features not requiring a browser add-on, plug-in, or extension.

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18. (Previously Presented) The customizable application system of claim 15, further including means for generating the application user interface using the metadata.

19. (Previously Presented) The customizable application system of claim 15, further including a configuration system configured to modify the data record.

20. (Previously Presented) The customizable application system of claim 19, wherein the configuration system is included in the internet application.

21. (Currently Amended) An internet application system comprising:
a user interface generator configured to generate an application user interface, the application user interface being compatible with a standard web browser and being generated in response to a request from a user, the user interface including a user customizable interaction model, the user customizable interaction model configured to determine timing of communication from a client displaying the application user interface, the user customizable interaction model further allowing each user of the application user interface to modify functionality of at least one user interface element in the application user interface;
a web application server configured to deliver the application user interface including the user-modified functionality to the client; and
an internet application accessible to the user through the generated application user interface.

22. (Previously Presented) The internet application system of claim 21, wherein the user interface generator is further configured to use metadata to characterize the user customizable interaction model.

23. (Previously Presented) The internet application system of claim 21, wherein the user customizable interaction model is specific to a user interface element included in the application user interface.

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24. (Previously Presented) The internet application system of claim 21, wherein the user interface generator is further configured to use a user modifiable data record to characterize the user customizable interaction model.

25. (Previously Presented) The internet application system of claim 24, wherein the internet application includes a configuration system configured to modify the user modifiable data record.

26. (Previously Presented) The internet application system of claim 21, wherein the user customizable interaction model is responsive to an identity of the client or to an identity of the user.

27. (Previously Presented) The internet application system of claim 21, wherein the user customizable interaction model includes deferred and immediate modes.

28. (Previously Presented) The internet application system of claim 21, wherein the client is wireless system.

29. (Currently Amended) An internet application comprising:
a computer program embodied in a computer readable medium and configured to run on an internet application system;

an application user interface including a user interface element with a customizable interaction model, the application user interface configured for delivery to a client and to operate as an interface between a user and the computer program;

a user modifiable data record stored in a location physically remote from the client, the data record configurable for use by a user interface generator to generate the application user interface, the data record being configurable by a user to allow the user to modify functionality of the user interface element, the data record characterizing further
~~configurable to characterize~~ the customizable interaction model including the user-modified functionality; and

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metadata configurable for use by the user interface generator to access the user modifiable data record.

30. (Previously Presented) The internet application of claim 29, wherein the customizable interaction model includes deferred and immediate modes.

31. (Previously Presented) The internet application of claim 29, wherein the user interface generator is responsive to an identity of the user.

32. (Previously Presented) The internet application of claim 29, further including a personalization system configured to modify the user modifiable data record.

33. (Currently Amended) An application user interface embodied in a computer readable medium and configured for communication between a user and an internet application, the application user interface being generated using metadata configured to access a user modifiable data record allowing a user to modify functionality of at least one user interface element in the application user interface, the application user interface including [[a]] the at least one user interface element configured for display using a standard web browser, the user interface element including a user customizable interaction model, the user customizable interaction model being characterized by the user modifiable data record.

34. (Previously Presented) The application user interface of claim 33, wherein the metadata is configured to access the user modifiable data record responsive to an identity of the user.

35. (Previously Presented) The application user interface of claim 33, wherein the user customizable interaction model includes deferred and immediate modes.

36. (Previously Presented) The application user interface of claim 33, wherein the user customizable interaction model is responsive to a command displayed on the application user interface.

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37. (Currently Amended) A customizable application system comprising:
an internet application system configured to support an internet application, the internet application including metadata configured for generating an application user interface, the internet application system including [[, a]] a user interface generator configured to generate the application user interface [[,]] and [[b]] a web application server configured to deliver the application user interface to a client;

an application development system configured to ~~generate~~ generate the metadata, the metadata being further configured to characterize a user customizable interaction model of the application user interface;

a configuration system including a configuration engine and a configuration interface, the configuration interface configured to modify configuration data characterizing the user customizable interaction model; [[and]]

a personalization system including a personalization engine and a user profile interface, the personalization system configured to allow users to modify personalization data characterizing the customizable interaction model, the user-modifiable personalization data allowing users to each modify the functionality of elements of the customizable interaction model for that user; and

a data repository including a data record configured to store the configuration and personalization data, the data record being accessible using the metadata.

38. (Currently Amended) A method of developing an application user interface associated with an internet application, the method comprising the steps of:

selecting a user customizable interaction model characterized by a data record, the data record being stored in a data repository and being user modifiable allowing a user to modify functionality of at least one user interface element in the application user interface, the data repository being physically remote from a client used to display the application user interface;

including the user customizable interaction model in the application user interface;

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generating metadata characterizing the user customizable interaction model
including the user-modified functionality, the metadata including a reference to the data record;
and

storing the metadata in association with the internet application, the internet application being configured for access using the application user interface.

39. (Previously Presented) The method of claim 38, wherein the application user interface includes an interaction model control command.

40. (Previously Presented) The method of claim 38, further including determining when communication occurs between the client and the internet application responsive to the interaction model.

41. (Currently Amended) A method of generating an application user interface, the method comprising the steps of:

accessing a page definition, the page definition including metadata associated with a customizable property of a interaction model;

accessing a data record using the metadata, the data record being stored in a data repository and being user modifiable allowing a user to modify the customizable property, the data repository being physically remote from a client used to display the application user interface;

determining a value characterizing the customizable property using the data record;

generating markup-language responsive to the determined value; and

including the generated markup-language in the application user interface, [[:]]
the application user interface being an interface to an internet application.

42. (Previously Presented) The method of claim 41, further including modifying the data record using a personalization system.

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43. (Previously Presented) The method of claim 41, wherein the customized property includes a deferred mode.

44. (Previously Presented) The method of claim 41, wherein the customized property is configured according to an identity of a user or an identity of the client.

45. (Currently Amended) A method of developing an HTML based application user interface including a user customizable interaction model, the method comprising the steps of:

selecting a user customizable interaction model associated with a data record and specifying functionality of at least one user interface element in the application user interface, the data record being configurable by a user for characterizing the user customizable interaction model, [[:]] the user customizable interaction model including a plurality of interaction modes;

including the user customizable interaction model in the HTML based application user interface;

generating metadata characterizing the user customizable interaction model, the metadata including a reference to the data record; and

storing the metadata in association with an application, the application being configured for access using the application user interface.

46. (Previously Presented) The method of claim 45, wherein a mode of the user customizable interaction model is responsive to a command included in the application user interface.

47. (Previously Presented) The method of claim 45, wherein a customizable property of the user customizable interaction model includes an immediate mode.

48. (Previously Presented) The method of claim 45, wherein a customizable state of the user customizable interaction model is configurable to persist between uses of the HTML based application user interface.

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49. (Currently Amended) A method of customizing [[a]] an interaction model in an HTML based application user interface, the method comprising the steps of:

accessing a configuration system, the configuration system including a configuration engine and a configuration interface;

selecting, using the configuration interface, a user interface element in the HTML based application user interface, the user interface element including a user customizable interaction model; and

specifying configuration data using the configuration interface, the configuration data characterizing the user customizable interaction model and specifying functionality of at least one user interface element in the application user interface, the configuration data being stored in a data repository physically remote from a client used to view the HTML based application user interface.

50. (Previously Presented) The method of claim 49, further including a step of including a command, configurable to modify the user customizable interaction model, in the HTML based application user interface.

51. (Previously Presented) The method of claim 49, wherein the configuration data is configurable to characterize a subset of all user interface elements in the HTML based application user interface.

52. (Previously Presented) The method of claim 49, further including a step of modifying the configuration data using a personalization system.

53. (Previously Presented) The method of claim 49, further including sending, responsive to the interaction model, data from the client to a server.

54. (Previously Presented) The method of claim 49, further including displaying the application user interface using standard web browser protocols.

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55. (Currently Amended) A method of customizing an interaction model in an application user interface, the method comprising the steps of:

accessing a configuration system, the configuration system including a configuration engine and a configuration interface;

selecting, using the configuration interface, the interaction model in the application user interface, the interaction model being user customizable;

specifying configuration data using the configuration interface, the configuration data characterizing the interaction model and specifying functionality of at least one user interface element in the application user interface;

storing the configuration data; and

generating the application user interface using the specified configuration data, the application user interface being HTML based and being configured to access an internet application.

56. (Previously Presented) The method of claim 55, further including displaying the application user interface using standard web browser protocols.

57. (Previously Presented) The method of claim 55, wherein specifying configuration data includes specifying deferred or immediate modes.

58. (Previously Presented) The method of claim 55, further including changing the interaction model responsive to a command displayed on the application user interface.

59. (Previously Presented) The method of claim 55, wherein the configuration data is user modifiable.

60. (Currently Amended) A method of executing an internet application comprising the steps of:

receiving a request for an application user interface from a client, the application user interface including a user interface element;

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accessing a page definition, the page definition including metadata characterizing the application user interface;

retrieving a value characterizing a customizable interaction model associated with the user interface element using the metadata, the value being stored in a data repository physically remote from the client, the value further being specified by a user in order to modify functionality of at least one user interface element in the application user interface;

generating HTML responsive to the retrieved value;

including the generated HTML in the application user interface; and

delivering the application user interface to the client, the application user interface being an interface between a user and the internet application.

61. (Previously Presented) The method of claim 60, wherein the retrieved value is used to determine a deferred or immediate mode of the customizable interaction model.

62. (Previously Presented) The method of claim 60, wherein the customizable interaction model is specific to the user interface element.

63. (Previously Presented) The method of claim 60, further including displaying the application user interface at the client using standard web browser protocols.

64. (Previously Presented) The method of claim 60, further including identifying a requestor of the application user interface, wherein the customizable interaction model is responsive to the identity of the requester.

65. (Currently Amended) A method of generating an application user interface including a customizable interaction model, the method comprising the steps of:

accessing a page definition, the page definition including metadata characterizing the customizable interaction model, the customizable interaction model configured to characterize communication from a client, the client being configurable to display the application user interface;

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reading a value from a data record using the metadata, the data record being stored in a data repository and being user modifiable allowing a user to modify functionality of at least one user interface element in the application user interface, the data repository being physically remote from the client;

characterizing a state of the customizable interaction model using the value;
generating HTML responsive to the state; and
including the generated HTML in the application user interface.

66. (Previously Presented) The method of claim 65, wherein the state of the customizable interaction model includes deferred or immediate modes.

67. (Previously Presented) The method of claim 65, further including modifying the customizable interaction model responsive to a user interface element included in the application user interface.

68. (Previously Presented) The method of claim 65, wherein the state of the customizable interaction model persists between uses of the application user interface.

69. (Previously Presented) The method of claim 65, further including displaying the application user interface using standard web browser protocols.

70. (Previously Presented) The method of claim 65, wherein the step of reading a value is responsive to an identity of a user of the application user interface.

71. (Currently Amended) A method of generating an application user interface configured for delivery from a server to a client, the method comprising the steps of:
receiving, at the server, a request for the application user interface from the client;
identifying the requester of the application user interface, the application user interface including a user customizable interaction model;
accessing a page definition, the page definition including metadata and
characterizing the application user interface;

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retrieving, using the metadata and the identity of the requester, a value for characterizing the user customizable interaction model, [[.]] the value being selected by the requestor in order to modify functionality of at least one user interface element in the application user interface, the value being stored in a data repository;

generating HTML incorporating the interaction model using the value;
including the generated HTML in the application user interface; and
delivering the application user interface from the server to the client.

72. (Previously Presented) The method of claim 71, further including communicating from the client to the server responsive to the interaction model.

73. (Previously Presented) The method of claim 72, wherein the communication occurs in a deferred mode.

74. (Previously Presented) The method of claim 71, further including displaying an interaction model control command in the user interface.

75. (Currently Amended) A computer readable medium including an internet application, the internet application comprising:

metadata defining an application user interface, the application user interface including a user interface element with a user customizable interaction model allowing a user to modify functionality of at least one user interface element in the application user interface, the application user interface configured for delivery to a client and configured to operate as an interface between a user and the internet application;

a user interface generator configured to generate the application user interface using a user modifiable data record stored in a location physically remote from the client, the user modifiable data record configurable to characterize the user customizable interaction model including the user-modifiable functionality; and

a configuration system configured for a user to modify the user modifiable data record.

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76. (Currently Amended) A computer readable medium including an internet application, the internet application comprising:

an application designer configured to develop an application user interface, the application user interface including a user interface element with a user customizable interaction model allowing a user to modify functionality of the user interface element, the application user interface configured for delivery to a client and configured to operate as an interface between a user and the internet application;

a user interface generator configured to generate the application user interface using a user modifiable data record stored in a location physically remote from the client, the user modifiable data record configurable to characterize the user customizable interaction model including the user-modifiable functionality; and

a configuration system configured for a user to modify the user modifiable data record.

77. (Currently Amended) An application execution system comprising:
means for supporting an internet application;

means for allowing a user to modify functionality of at least one user interface element of an application user interface;

means for generating [[an]] the application user interface using a user modifiable data record configured to store data characterizing a user customizable interaction model including the user-modifiable functionality; and

means for providing the application user interface to a user, the application user interface including [[a]] the at least one user interface element, the application user interface configured as an interface between the internet application and the user, the user interface element including the user customizable interaction model, the user interface element configured for delivery to a client over a computer network.